

## THE COASTAL DILEMMA

What are our alternatives? We must understand how the natural coastal system works and accept that reality. We must consider building temporary bridges across new inlets instead of closing them. We must consider letting oceanic overwash build barrier island elevation and width, and install temporary roads to allow access. We must consider the challenges of coastal change to be opportunities. We can then determine the best ways to sustain and grow our coastal economy, and new ways to make our living at the coast. We must embrace relocation as a means of adaptation to an ever-changing environment. We should embrace the historic culture and the wild, remoteness of the Outer Banks and parlay that attribute into economic advantage. Ocracoke Village and Ocracoke Island are desirable tourist destinations in large part because of their remoteness. Perhaps the other villages along the Outer Banks can be part of a “string of pearls” of vacation destinations. Perhaps personal cars can be replaced by other means of transport (rented golf carts, trolleys, bicycles) along some portions of the barrier islands. Perhaps fast high-tech ferry systems can transport vacationers to their destinations. Perhaps rural mainland towns can become ferry hubs with motels, restaurants, service stations, parking lots, and other industry in support of this new coastal economy. Perhaps these towns can themselves become the centers of coastal tourism with estuarine cruises, wildlife tours, historic and cultural programs, hunting and fishing tours, natural history aerial field trips, black-water paddle and camping trips, etc. Adaptation strategies can be similarly developed for the southern part of our coast where the barriers can be considered to be “islands of opportunity”.

This vision for a new and economically viable and advantageous coastal North Carolina is preliminary and unrefined. But no matter how this vision evolves, planning for future coastal development must take place within the framework of known natural processes of change. Our coastal economy can then experience a renaissance that has more potential pay-offs than the current approach to coastal management can provide in a changing climatic regime.

Change is the only constant within the North Carolina coastal system. It can occur as an almost imperceptibly gradual process in response to shifts in climate and sea level, or suddenly during high-energy events such as winter nor'easters and summer hurricanes. Barrier islands are built by storms and are dependent upon storm events to maintain their short-term health and long-term evolution.

Some of the greatest population growth rates in North Carolina, together with unprecedented urban expansion, are presently occurring within this coastal zone. New four-lane roads and bridges are being constructed, new water supplies are being developed, and pressures upon severely overloaded sewage disposal systems are increasing. This growth, intimately intertwined with a booming tourist industry, has substantial environmental impacts. Maritime forests are cleared, shorelines are hardened with bulkheads, shallow-waters are dredged, wetlands are channelized and filled, dune fields are bulldozed, and the surface is paved for parking lots. All of these activities modify the land surface, alter the drainage, and result in increased contaminants moving into the adjacent coastal waters.

The natural coastal system is not fragile. It is a high-energy, storm-dependent system characterized by environmental extremes. It is the fixed anthropogenic structures superimposed upon this dynamic system that are fragile. No guaranteed permanency exists for any ecosystem, landform, or built structure at the coast. Our attempts to transform our coasts into a stable, engineered system conflict with the dynamic nature of the natural environment. Our coasts are eroding, roads and bridges are threatened, water quality is compromised, and the tourist economy is at risk. This is why North Carolina's coasts are in crisis.

This White Paper is produced for coastal managers, agencies, business owners, politicians, residents of and visitors to the coast — anyone who has an interest in maintaining the unique character of our coast that draws so many tourists to it every year. The global climate is warming, the intensity of tropical storms might increase, and the rate of sea-level rise is increasing. Can we deal wisely with these issues so that we can adapt to the coming changes rather than be overwhelmed by them?